

ABSTRACT

The present invention provides an OCT technique that permits tomographic observation of a biological body parts that is difficult to restrain and also provides a tomographic observation technique for the observation of a constrainable part that does not require constraint and remove the burden from biological body. A wavelength-tunable light generator (wavelength-tunable light source) is employed as the light source of the optical coherence tomography device. The wavelength-tunable light generator has a wave number tunable range width of at least $4.7 \times 10^{-2} \mu\text{m}^{-1}$ and an emitted-light frequency width of no more than 13 GHz, for example, and includes means capable of changing the wave number stepwise at wave number intervals of no more than $3.1 \times 10^{-4} \mu\text{m}^{-1}$ and time intervals of no more than 530 μs .